Eva Reynaert

Curriculum Vitae

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Info

Born July 11th 1991 Citizenship Swiss

French and German: native, English: C1-C2, Spanish: B2-C1

Research focus on sanitation and wastewater reuse

Work experience in Switzerland, South Africa, Bolivia, Burkina Faso

Education

2020-2023 **PhD in Environmental Sciences and Engineering**, *ETHZ*, Zurich.

2014-2017 **MSc in Environmental Sciences and Engineering**, *EPFL*, Lausanne, 5.66/6.
Specialization: Envirochemical and Bioprocess Engineering
Master thesis: Effect of influent composition on the microbial communities and granulation process in aerobic granular sludge systems

2011-2014 **BSc in Environmental Sciences and Engineering**, *EPFL*, Lausanne, 5.53/6.

2005-2010 **High school**, *Wirtschaftsgymnasium*, Basel, 6/6.
Final project: Microcredits for a better future? A survey among women in Ouagadougou

Professional experience

2017-2020 **Research assistant in the Department of Process Engineering (3 years)**, *Eawag*, Dübendorf and Durban (South Africa).
Laboratory full-scale and batch testing of a water recycling technology
Redesign and field testing of water recycling prototypes in real-life conditions

2016 **Intern in the Department of Sanitation, Water and Solid Waste for Development (Sandec)(4 months)**, *Eawag / Helvetas*, Dübendorf and Cochabamba (Bolivia).
Assessment and further development of a sanitation system based on urine diverting dry toilets (UDDTs) in Arbieto (Valle Alto de Cochabamba, Bolivia)

2014-2016 **Student teaching assistant in the Section for Environmental Sciences and Engineering**, *EPFL*, Lausanne.
Courses: Sanitary Engineering, Quantitative Methods, Analysis

2015 **Intern in the Department for Water and Environment (2 months)**, *Stucky SA*, Renens (VD).
Main projects: Impact study for Alimit Dam (Philippines), hazard map for the shore of Lake Neuchâtel

2014 **Intern in the Department for Water and Environment (2.5 months)**, *Gruner Böhringer AG* , Oberwil (BL).
Main project: Revitalisation of the Glatt River in the perimeter of Zürich Airport

Honors and distinctions

2017 Master's degree with mention of excellence

2014 Excellence Fellowship from EPFL for students with outstanding academic records

2014-2016 Fellowship from the Dr. Max Husmann Foundation Zurich

2011 Basler Maturandenpreis from Novartis for remarkable achievements and exceptional commitment

2010 Award from the Baehler Foundation Basel for the best diploma

Publications and conference contributions

Peer-reviewed publications

Reynaert, E[*], Hess, A and Morgenroth, E (2021). Making Waves: Why water reuse frameworks need to co-evolve with emerging small-scale technologies *Water Research X*, 199984

Sutherland, C, **Reynaert, E**[*,°], Sindall, R, Riechmann, ME, Magwaza, F, Lienert, J, Buthelezi, S, Khumalo, D, Dhlamini, S, Morgenroth, E and Udert, KM (2021). Innovation for improved hand hygiene in informal settlements: field testing the Autarky handwashing station in collaboration with informal settlement residents in Durban, South Africa. *Science of the Total Environment*, 796, 149024

Sutherland, C, **Reynaert, E**[*,°], Sindall, R, Dhlamini, S, Magwaza, F, Lienert, J, Riechmann, ME, Buthelezi, S, Khumalo, D, Morgenroth, E and Udert, KM (2021). Socio-technical analysis of a sanitation innovation in a peri-urban household in Durban, South Africa. *Science of the total Environment 755*, 143284

Reynaert, E, Greenwood, EE, Bonginkosi, N, Riechmann, ME, Sindall, RC, Udert, KM and Morgenroth, E (2020). Practical implementation of true on-site water recycling systems for hand washing and toilet flushing. *Water Research X*, 100051.

Layer, M, Villodres, MG, Hernandez, A, **Reynaert, E**, Morgenroth, E and Derlon, N (2020). Limited simultaneous nitrification-denitrification (SND) in aerobic granular sludge systems treating municipal wastewater: Mechanisms and practical implications. *Water Research X*, 100048.

Ziemba, C, Larivé, O, **Reynaert, E,** Huisman, T and Morgenroth, E (2020). Linking transformations of organic carbon to post-treatment performance in a biological water recycling system. *Science of the Total Environment*, 137489.

Layer, M, Adler, A, **Reynaert, E,** Hernandez, A, Pagni, M, Morgenroth, E, Holliger, C and Derlon, N (2019). Organic substrate diffusibility governs microbial community composition, nutrient removal performance and kinetics of granulation of aerobic granular sludge. *Water Research X*, 100033.

Ziemba, C, Larivé, O, **Reynaert, E** and Morgenroth, E (2018). Chemical composition, nutrient-balancing and biological treatment of hand washing greywater. *Water Research*, 144, 752–762.

[*]: corresponding author; °: equal contribution with first author

Other publications

Lüthi, C, Renggli, S, Reymond, P, **Reynaert, E**, Klinger, M, Sherpa, A, Sherpa, M and Mtika, W (2018). Small Towns: Research on Solutions for the Sanitation (Planning) Gap. Sandec is conducting cross-sectional applied research on small town sanitation planning in Nepal, Malawi and Bolivia. Sandec News, 18, 12–13.

Reynaert, E (2017). Effect of influent composition on the microbial communities and granulation process in aerobic granular sludge systems. Master Thesis, EPFL. Available at: https://infoscience.epfl.ch/record/231380.

Submitted manuscripts

Riechmann, ME, Ndwandwe, B, Greenwood, EE, **Reynaert, E,**, Morgenroth, E and Udert, KM. On-site urine treatment combining $Ca(OH)_2$ dissolution and dehydration with ambient air. Submitted to *Water Research X*.

Conference contributions

Morgenroth, E and **Reynaert, E**. Dezentrale Wassersysteme: Möglichkeiten für Wiederverwendung, Energie- und Nährstoffrückgewinnung. 54. Essener Tagung für Wasserwirtschaft, June 2021

5th International Faecal Sludge Management Conference, February 2019, Cape Town, South Africa. Exhibition booth: Presentation of the Blue Diversion Autarky Toilet model and informational material.

Reivented Toilet Expo, November 2018, Beijing, China. Exhibition booth: Presentation of full-scale prototypes of the Blue Diversion Autarky Toilet and Autarky Handwashing Station.

Reynaert, E, Ziemba, C, Larivé, O and Morgenroth, E. Correcting Nutrient Imbalance in Hand Washing Water to Permit Recycling with a Biologically Activated Membrane Bioreactor. Poster presentation at: IWA: 2nd International Resource Recovery Conference, August 2017, New York, USA.

Layer, M, Adler, A, **Reynaert, E**, Hernandez, A, Morgenroth, E, Holliger, C and Derlon, N. Influent wastewater composition governs microbial community composition, nutrient removal performance and kinetics of granulation in aerobic granular sludge. Presentation at: IWA Biofilms: Granular Sludge Conference 2018, March 18-21; Delft, The Netherlands.

Adler, A, **Reynaert, E**, Layer, M, Derlon, N and Holliger, C. Influence of Wastewater Composition On Microbial Communities Of Aerobic Granules And Their Nutrient Removal Performances. Presentation at: 10th International Conference on Biofilm Reactors; 2017 May 9–12; University College Dublin, Ireland.